ANSWER KEY

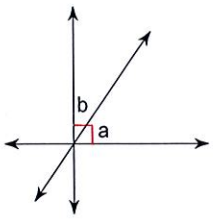
Geometry Name_____ ID: 1

Practice Quiz: Angles

Date_____ Period____

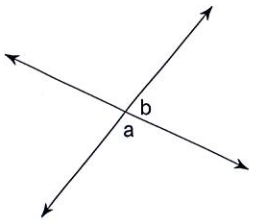
Name the relationship: complementary, linear pair, or vertical.

1)



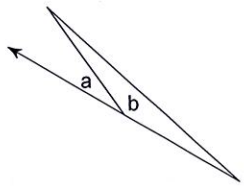
complementary

2)



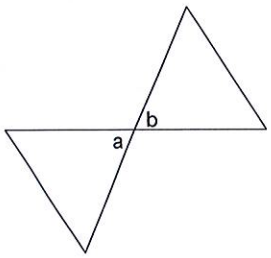
linear pair

3)



linear pair

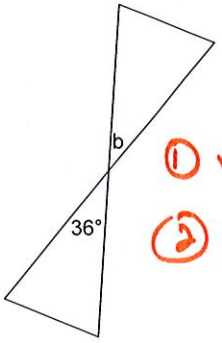
4)



vertical angles

Identify the angle pair, then the measure of angle b.

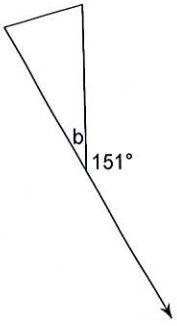
5)



① vertical angles

② b = 36°

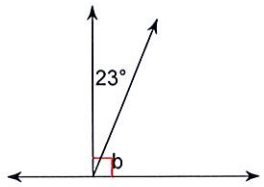
6)



① linear pair

② b = 29°

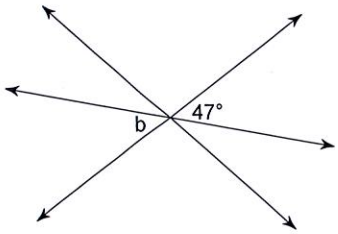
7)



① complementary angles

② $b = 67°$

8)

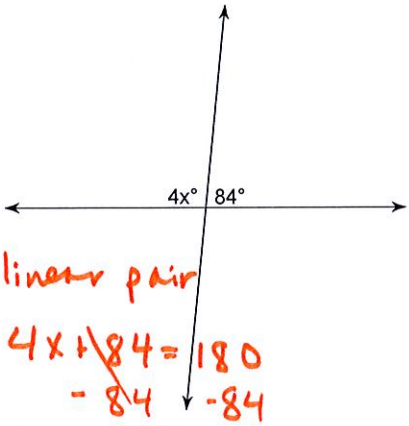


① vertical angles

② $b = 47°$

Identify the angle pair, set up an equation, then solve for x.

9)



① linear pair

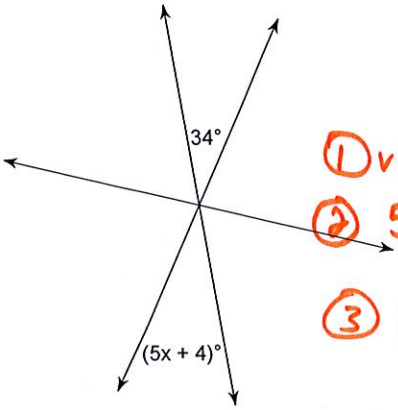
② $4x + 84 = 180$

$-84 \quad -84$

$4x = 96$

③ $x = 24$

10)

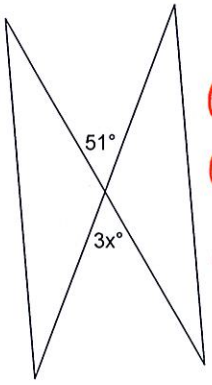


① vertical angles

② $5x + 4 = 34$

③ $x = 6$

11)

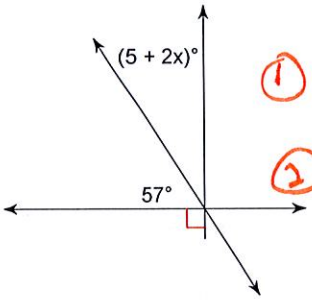


① vertical angles

② $51 = 3x$

③ $x = 17$

12)



① complementary angles

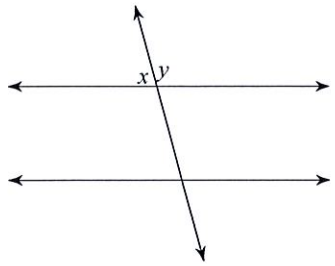
② $57 + 5 + 2x = 90$

$62 + 2x = 90$

③ $x = 14$

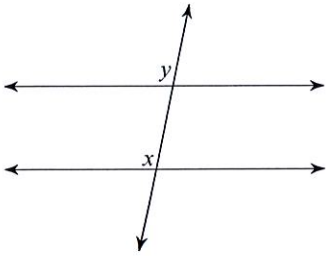
Identify each pair of angles as corresponding, alternate interior, alternate exterior, same-side interior, vertical, or linear pair.

13)



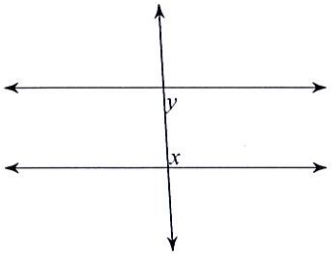
linear pair

14)



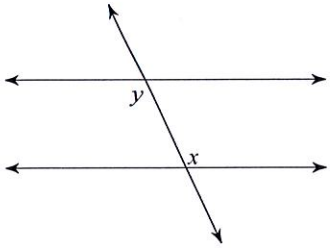
corresponding

15)



same side interior

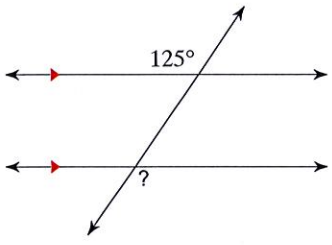
16)



alternate interior

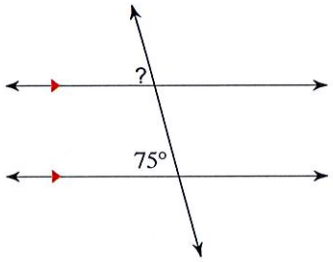
Find the value of the missing angle and state how you know (using transversal vocabulary).

17)



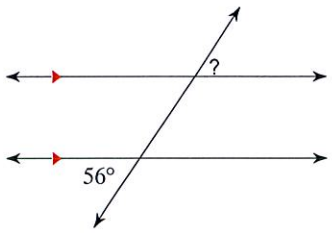
125° because they are alternate exterior angles, which are equal when lines are parallel.

18)



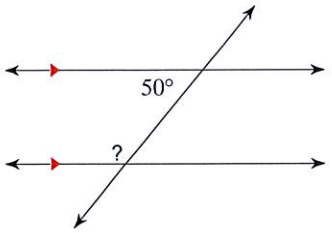
75° because they are corresponding angles, which are equal when lines are parallel.

19)



56° because they are alternate exterior angles, which are equal when lines are parallel.

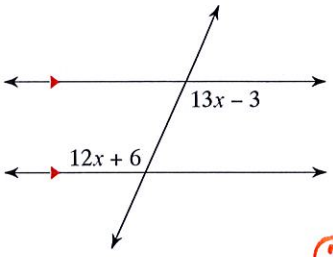
20)



130° because they are same side interior angles, which are supplementary when lines are parallel.

Set up an equation to solve for x. Justify your equation by using transversal vocabulary.

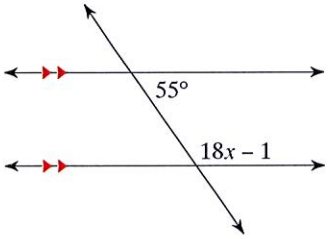
21)



① $12x + 6 = 13x - 3$
$-12x \quad -12x$
$6 = x - 3$
$+3 \quad +3$
③ $9 = x$

② b/c alt. int. angles are = when lines are parallel

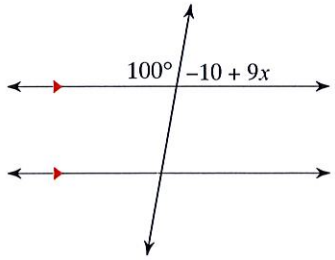
22)



① $55 + 18x - 1 = 180$
$18x + 54 = 180$
③ $x = 7$

② b/c same side int. angles are supplementary when lines are parallel

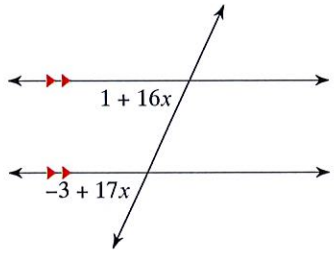
23)



① $100 + -10 + 9x = 180°$
③ $x = 10$

② b/c they are a linear pair

24)

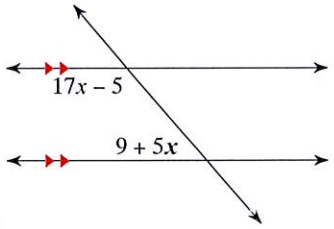


① $1 + 16x = -3 + 17x$
③ $x = 4$

② b/c corresponding angles are = when lines are parallel

Set up an equation to solve for x. Justify your equation by using transversal vocabulary. Then find the measure of each angle.

25)

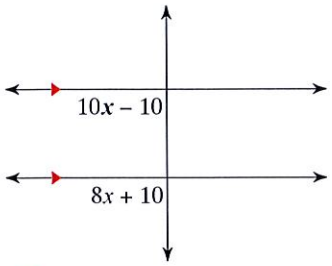


① $17x - 5 + 9 + 5x = 180$

② b/c same side interior angles are supplementary when lines are parallel

③ $x = 49$

26)

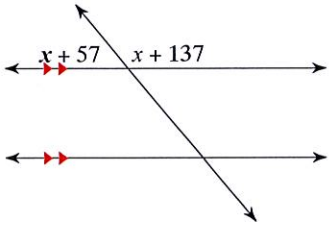


① $8x + 10 = 10x - 10$

② Corresponding angles are equal when lines are parallel

③ $x = 90$

27)

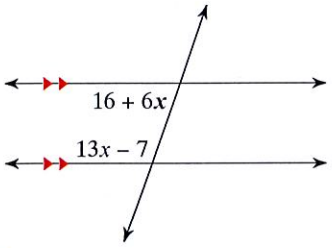


① $x + 57 + x + 137 = 180°$

② b/c linear pairs are supplementary

③ $x = 50$

28)



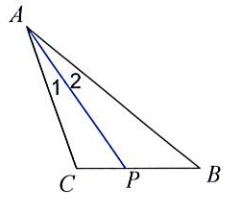
① $16 + 6x + 13 - 7 = 180°$

② same side interior angles are supplementary when lines are parallel

③ $x = 70$

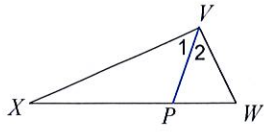
Each figure shows a triangle with one of its angle bisectors.

29) Find $m\angle 1$ if $m\angle CAB = 32°$.



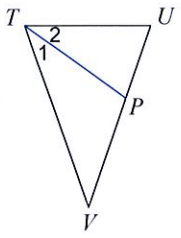
$m\angle 1 = 16°$

30) $m\angle 2 = 46°$. Find $m\angle XVW$.



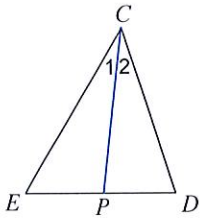
$m\angle XVW = 92°$

31) Find $m\angle 2$ if $m\angle 1 = 35°$.



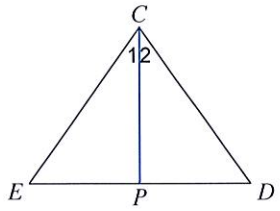
$m\angle 2 = 35°$

32) $m\angle 2 = 24°$. Find $m\angle ECD$.



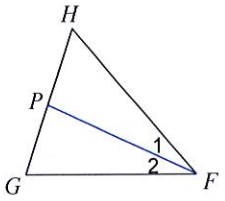
$m\angle ECD = 48°$

33) $m\angle 2 = 5x - 5$ and $m\angle 1 = 3x + 11$. Find x.



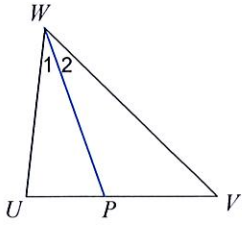
$x = 8$

34) Find x if $m\angle 2 = 3x - 3$ and $m\angle HFG = 5x + 3$.



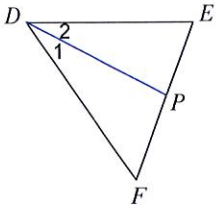
$x = 9$

35) $m\angle 1 = 2x + 10$ and $m\angle UWV = 6x + 4$. Find x.



$x = 8$

36) Find x if $m\angle 1 = 13x + 1$ and $m\angle 2 = 14x - 1$.



$x = 2$